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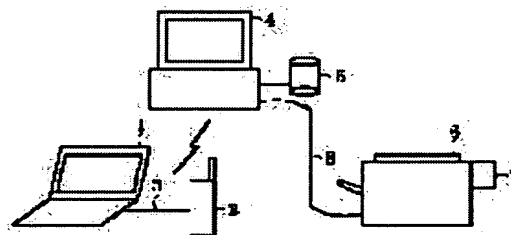
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(54) DATA PROCESSING SYSTEM, DATA PROCESSING METHOD FOR THE DATA PROCESSING SYSTEM AND STORAGE MEDIUM STORING PROGRAM READABLE BY COMPUTER

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a print service to users in which the print service using a portable terminal is available for the users at an optional installation location while imposing a charge on the users.

SOLUTION: While a CPU of a server 4 authenticates a user by collating the user with registered user information, a portable terminal 1 is used to register print data to a storage means 5 connecting with the server 4, after an authentication means 7 authenticates whether or not a user visiting an installed location of an image forming device 6 is the registered user, registered print data are read from the storage means 5 of the server 4 based on a print data output request from the user and an image forming device 10 prints out the data.



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CLAIMS

[Claim(s)]

[Claim 1] It is the data processing system with which the server equipped with a storage through predetermined communication media, a personal digital assistant, and image formation equipment can communicate. The 1st authentication means which attests the user who collates User Information inputted from said personal digital assistant, and User Information registered into said server, and demands the input of print data, The 1st control means which controls the registration activation to the storage of the print data with which User Information is added and transmitted from said personal digital assistant based on the authentication result by said 1st authentication means, The 2nd authentication means which attests the user who collates User Information inputted with said image formation equipment, and User Information registered into the storage of said server, and demands the output of said print data from on said image formation equipment, Data processing system characterized by having the 2nd control means which acquires the print data registered from said storage of said server based on the authentication result of said 2nd authentication means, and controls the image output activation by image formation equipment.

[Claim 2] Data processing system according to claim 1 characterized by having the accounting means which asks a user for the image output toll computed after the image output by said image formation equipment, and carries out settlement-of-accounts processing.

[Claim 3] It is the data processing system according to claim 1 characterized by attesting the user who said 2nd authentication means collates the password entered, character-string data, and the password and character-string data which were registered into said storage when said 1st authentication means publishes a password based on the character-string-data input from said personal digital assistant, and demands the output of said print data.

[Claim 4] User Information is data processing system according to claim 1 characterized by considering as the user-identification information memorized by the credit card.

[Claim 5] Said 2nd authentication means is data processing system according to claim 1 characterized by attesting the user who reads the user-identification information memorized by the credit card, and demands the output of said print data.

[Claim 6] Said 1st control means is data processing system according to claim 1 characterized by carrying out automatic elimination of said print data registered into said storage after progress of the data maintain period specified from said personal digital assistant.

[Claim 7] It is the data processing system with which two or more image formation equipments equipped with a server, a personal digital assistant, and a storage through predetermined communication media can communicate. The 1st authentication means which attests the user who collates User Information inputted from said personal digital assistant, and User Information registered into said server, and demands the input of print data, The 1st control means which controls activation of the transfer registration to the storage of one which is specified via said server in the print data with which User Information received from said personal digital assistant is added based on the authentication result by said 1st authentication means of image formation equipments, The 2nd authentication means which attests the user who collates User Information which has inputted the image output request to said image formation equipment, and User Information registered into said storage, and demands the output of said print data, Data processing system characterized by having the 2nd control means which controls output activation of the print data read from said storage based on the authentication result by said 2nd authentication means.

[Claim 8] Data processing system according to claim 7 characterized by having the accounting means which asks a user for the image output toll computed after the image output by said image formation equipment, and carries out settlement-of-accounts processing.

[Claim 9] It is the data processing system according to claim 7 characterized by attesting the user who said 2nd authentication means collates the password entered, character-string data, and the password and

character-string data which were registered into said storage when said 1st authentication means publishes a password based on the character-string-data input from said personal digital assistant, and demands the output of said print data.

[Claim 10] User Information is data processing system according to claim 7 characterized by considering as the user-identification information memorized by the credit card.

[Claim 11] Said 2nd authentication means is data processing system according to claim 7 characterized by attesting the user who reads the user-identification information memorized by the credit card, and demands the output of said print data.

[Claim 12] Said 2nd control means is data processing system according to claim 7 characterized by carrying out automatic elimination of said print data registered into said storage after progress of the data maintain period specified from said personal digital assistant.

[Claim 13] It is the data-processing approach of data processing system that the server equipped with a storage through predetermined communication media, a personal digital assistant, and image formation equipment can communicate. The 1st authentication process which attests the user who collates User Information inputted from said personal digital assistant, and User Information registered into said server, and demands the input of print data, The registration process which registers into a storage the print data with which User Information is added and transmitted from said personal digital assistant based on the authentication result by said 1st authentication process, The 2nd authentication process which attests the user who collates User Information inputted with said image formation equipment, and User Information registered into the storage of said server, and demands the output of said print data from on said image formation equipment, The output process which acquires the print data registered from said storage of said server, and carries out an image output based on the authentication result by said 2nd authentication process, The data-processing approach of the data processing system characterized by having the accounting process which asks a user for the image output toll computed after the image output by said output process, and carries out settlement-of-accounts processing.

[Claim 14] It is the data-processing approach of data processing system that two or more image formation equipments equipped with a server, a personal digital assistant, and a storage through predetermined communication media can communicate. The 1st authentication process which attests the user who collates User Information inputted from said personal digital assistant, and User Information registered into said server, and demands the input of print data, The registration process which performs transfer registration to the storage of one which is specified via said server in the print data with which User Information received from said personal digital assistant is added based on the authentication result by said 1st authentication process of image formation equipments, The 2nd authentication process which attests the user who collates User Information which has inputted the image output request to said image formation equipment, and User Information registered into said storage, and demands the output of said print data, The output process which outputs the print data read from said storage based on the authentication result by said 2nd authentication process, The data-processing approach of the data processing system characterized by having the accounting process which asks a user for the image output toll computed after the image output by said output process, and carries out settlement-of-accounts processing.

[Claim 15] It is the storage which stored the program which the computer which controls the data processing system with which the server equipped with a storage through predetermined communication media, a personal digital assistant, and image formation equipment can communicate can read. The 1st authentication process which attests the user who collates User Information inputted from said personal digital assistant, and User Information registered into said server, and demands the input of print data, The registration process which registers into a storage the print data with which User Information is added and transmitted from said personal digital assistant based on the authentication result by said 1st authentication process, The 2nd authentication process which attests the user who collates User Information inputted with said image formation equipment, and User Information registered into the storage of said server, and demands the output of said print data from on said image formation equipment, The output process which acquires the print data registered from said storage of said server, and carries out an image output based on the authentication result by said 2nd authentication process, The storage which stored the program which the computer characterized by having the accounting process which asks a user for the image output toll computed after the image output by said output process, and carries out settlement-of-accounts processing can read.

[Claim 16] It is the storage which stored the program which the computer which controls the data processing system with which two or more image formation equipments equipped with a server, a personal digital assistant, and a storage through predetermined communication media can communicate can read. The 1st

authentication process which attests the user who collates User Information inputted from said personal digital assistant, and User Information registered into said server, and demands the input of print data, The registration process which performs transfer registration to the storage of one which is specified via said server in the print data with which User Information received from said personal digital assistant is added based on the authentication result by said 1st authentication process of image formation equipments, The 2nd authentication process which attests the user who collates User Information which has inputted the image output request to said image formation equipment, and User Information registered into said storage, and demands the output of said print data, The output process which outputs the print data read from said storage based on the authentication result by said 2nd authentication process, The storage which stored the program which the computer characterized by having the accounting process which asks a user for the image output toll computed after the image output by said output process, and carries out settlement-of-accounts processing can read.

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the storage which stored the data-processing approach of the data processing system with which a server, a personal digital assistant, and image formation equipment can communicate, and data processing system, and the program which a computer can read through predetermined communication media.

[0002]

[Description of the Prior Art] In recent years, by development of communication technology, semiconductor technology, etc., the cellular phone and the personal digital assistant have spread widely, and various data processing system is proposed.

[0003] On the other hand, it can be fixed steadily, and also in going out, via a public telephone or a cellular phone, it connects with a website and its own personal computer (PC) from a personal digital assistant, and data can be acquired from a going-out place, or they can perform [telecom infrastructures, such as the Internet, can also be transmitted and] various data processing now free from a destination.

[0004]

[Problem(s) to be Solved by the Invention] However, in the above data processing system, even if it is going to print the information on a personal digital assistant on paper during going out The device to print does not exist in many cases. Usually Unless it returned to its firm and house, it could not output, but an output destination change will be restricted, it acquired at the destination of a request of the output of the acquired data, and there was a trouble of it seeming that the data for which a customer asks can be created at the destination of arbitration.

[0005] This invention is what was made in order to cancel the above-mentioned trouble. The purpose of this invention The data processing system with which the server equipped with a storage through predetermined communication media, a personal digital assistant, and image formation equipment can communicate Or it sets to the data processing system with which two or more image formation equipments equipped with a server, a personal digital assistant, and a storage through predetermined communication media can communicate. Register with the storage by which print data are connected to a server from a personal digital assistant, collating with User Information which had the user registered, and attesting, or Or preliminary announcement registration is carried out at the storage by which print data are connected to image formation equipment via a server from a personal digital assistant. After attesting whether you are the user by whom the user who went to the installation of image formation equipment was registered, By controlling read-out processing of print data, accounting, etc. which were registered from the storage of a server, or the storage of image formation equipment based on the print-data output request from a user A user is provided with the print service which a user can receive while being accompanied by accounting at the installation place of the arbitration equipped with image formation equipment for the printing service using a personal digital assistant. it is offering the storage which stored the data-processing approach of the data processing system which boils the convenience of a personal digital assistant markedly and can improve, and data processing system, and the program which a computer's can read.

[0006]

[Means for Solving the Problem] The 1st invention concerning this invention is the data processing system with which the server equipped with a storage through predetermined communication media, a personal digital assistant, and image formation equipment can communicate. The 1st authentication means which attests the user who collates User Information inputted from said personal digital assistant, and User Information registered into said server, and demands the input of print data, The 1st control means which controls the registration activation to the storage of the print data with which User Information is added and

transmitted from said personal digital assistant based on the authentication result by said 1st authentication means, The 2nd authentication means which attests the user who collates User Information inputted with said image formation equipment, and User Information registered into the storage of said server, and demands the output of said print data from on said image formation equipment, It has the 2nd control means which acquires the print data registered from said storage of said server based on the authentication result of said 2nd authentication means, and controls the image output activation by image formation equipment. [0007] The 2nd invention concerning this invention has the accounting means which asks a user for the image output toll computed after the image output by said image formation equipment, and carries out settlement-of-accounts processing.

[0008] When, as for the 3rd invention concerning this invention, said 1st authentication means publishes a password based on the character-string-data input from said personal digital assistant, said 2nd authentication means attests the user who collates the password entered, character-string data, and the password and character-string data which were registered into said storage, and demands the output of said print data.

[0009] The 4th invention concerning this invention makes User Information the user-identification information memorized by the credit card.

[0010] The user who said 2nd authentication means reads the user-identification information memorized by the credit card in the 5th invention concerning this invention, and demands the output of said print data is attested.

[0011] The 6th invention concerning this invention carries out automatic elimination of said print data registered into said storage after progress of the data maintain period as which said 1st control means is specified from said personal digital assistant.

[0012] The 7th invention concerning this invention is the data processing system with which two or more image formation equipments equipped with a server, a personal digital assistant, and a storage through predetermined communication media can communicate. The 1st authentication means which attests the user who collates User Information inputted from said personal digital assistant, and User Information registered into said server, and demands the input of print data, The 1st control means which controls activation of the transfer registration to the storage of one which is specified via said server in the print data with which User Information received from said personal digital assistant is added based on the authentication result by said 1st authentication means of image formation equipments, The 2nd authentication means which attests the user who collates User Information which has inputted the image output request to said image formation equipment, and User Information registered into said storage, and demands the output of said print data, Based on the authentication result by said 2nd authentication means, it has the 2nd control means which controls output activation of the print data read from said storage.

[0013] The 8th invention concerning this invention has the accounting means which asks a user for the image output toll computed after the image output by said image formation equipment, and carries out settlement-of-accounts processing.

[0014] When, as for the 9th invention concerning this invention, said 1st authentication means publishes a password based on the character-string-data input from said personal digital assistant, said 2nd authentication means attests the user who collates the password entered, character-string data, and the password and character-string data which were registered into said storage, and demands the output of said print data.

[0015] The 10th invention concerning this invention makes User Information the user-identification information memorized by the credit card.

[0016] The user who said 2nd authentication means reads the user-identification information memorized by the credit card in the 11th invention concerning this invention, and demands the output of said print data is attested.

[0017] The 12th invention concerning this invention carries out automatic elimination of said print data registered into said storage after progress of the data maintain period as which said 2nd control means is specified from said personal digital assistant.

[0018] The 13th invention concerning this invention is the data-processing approach of data processing system that the server equipped with a storage through predetermined communication media, a personal digital assistant, and image formation equipment can communicate. The 1st authentication process which attests the user who collates User Information inputted from said personal digital assistant, and User Information registered into said server, and demands the input of print data, The registration process which registers into a storage the print data with which User Information is added and transmitted from said personal digital assistant based on the authentication result by said 1st authentication process, The 2nd

authentication process which attests the user who collates User Information inputted with said image formation equipment, and User Information registered into the storage of said server, and demands the output of said print data from on said image formation equipment, The output process which acquires the print data registered from said storage of said server, and carries out an image output based on the authentication result by said 2nd authentication process, It has the accounting process which asks a user for the image output toll computed after the image output by said output process, and carries out settlement-of-accounts processing.

[0019] The 14th invention concerning this invention is the data-processing approach of data processing system that two or more image formation equipments equipped with a server, a personal digital assistant, and a storage through predetermined communication media can communicate. The 1st authentication process which attests the user who collates User Information inputted from said personal digital assistant, and User Information registered into said server, and demands the input of print data, The registration process which performs transfer registration to the storage of one which is specified via said server in the print data with which User Information received from said personal digital assistant is added based on the authentication result by said 1st authentication process of image formation equipments, The 2nd authentication process which attests the user who collates User Information which has inputted the image output request to said image formation equipment, and User Information registered into said storage, and demands the output of said print data, Based on the authentication result by said 2nd authentication process, it has the output process which outputs the print data read from said storage, and the accounting process which asks a user for the image output toll computed after the image output by said output process, and carries out settlement-of-accounts processing.

[0020] The 15th invention concerning this invention is the storage which stored the program which the computer which controls the data processing system with which the server equipped with a storage through predetermined communication media, a personal digital assistant, and image formation equipment can communicate can read. The 1st authentication process which attests the user who collates User Information inputted from said personal digital assistant, and User Information registered into said server, and demands the input of print data, The registration process which registers into a storage the print data with which User Information is added and transmitted from said personal digital assistant based on the authentication result by said 1st authentication process, The 2nd authentication process which attests the user who collates User Information inputted with said image formation equipment, and User Information registered into the storage of said server, and demands the output of said print data from on said image formation equipment, The output process which acquires the print data registered from said storage of said server, and carries out an image output based on the authentication result by said 2nd authentication process, The program which a computer including the accounting process which asks a user for the image output toll computed after the image output by said output process, and carries out settlement-of-accounts processing can read is stored in a storage.

[0021] The 16th invention concerning this invention is the storage which stored the program which the computer which controls the data processing system with which two or more image formation equipments equipped with a server, a personal digital assistant, and a storage through predetermined communication media can communicate can read. The 1st authentication process which attests the user who collates User Information inputted from said personal digital assistant, and User Information registered into said server, and demands the input of print data, The registration process which performs transfer registration to the storage of one which is specified via said server in the print data with which User Information received from said personal digital assistant is added based on the authentication result by said 1st authentication process of image formation equipments, The 2nd authentication process which attests the user who collates User Information which has inputted the image output request to said image formation equipment, and User Information registered into said storage, and demands the output of said print data, The output process which outputs the print data read from said storage based on the authentication result by said 2nd authentication process, The program which a computer including the accounting process which asks a user for the image output toll computed after the image output by said output process, and carries out settlement-of-accounts processing can read is stored in a storage.

[0022]

[Embodiment of the Invention] The [1st operation gestalt] Drawing 1 is drawing explaining the configuration of the information processing system in which the 1st operation gestalt of this invention is shown.

[0023] In drawing 1, 1 is a personal digital assistant which the user has, and 2 is cellular phones, such as PHS. The personal digital assistant 1 and the cellular phone 2 are connected with the telecommunication

cable 3.

[0024] 4 is a server, it has a control unit equipped with CPU, RAM, ROM, etc., and while the directions from the keyboard which is not illustrated perform data processing, the whole information processing system is controlled and a storage means 5 to function as secondary storage, such as a hard disk, is connected. A user's authentication information beforehand registered into storage 5 is memorized.

[0025] 6 is image formation equipment, is equipped with an authentication means 7 to perform authentication processing of a user, and is constituted by the telephone line 8 possible [a communication link by the server 4 and predetermined pro KOTORU]. In addition, it is constituted so that the data which were equipped with the reader section which reads the authentication information memorized by the various memory media of a magnetic card, a PURIPEDO card, and an IC card, and read it to image formation equipment 6 through the interface which is not illustrated may be outputted to the authentication means 7. [0026] Hereafter, the characteristic configuration of this operation gestalt is explained with reference to drawing 1 R> 1.

[0027] It is the data processing system with which the server 4 equipped with a storage (storage means 5) through the predetermined communication media constituted as mentioned above, a personal digital assistant 1, and image formation equipment 6 can communicate. The 1st authentication means which attests the user who collates User Information inputted from said personal digital assistant 1, and User Information registered into said server 4, and demands the input of print data (CPU of a server 4 performs the control program memorized by ROM and other memory resources, and carries out authentication processing), It is based on the authentication result by said 1st authentication means. The 1st control means which controls the registration activation to the storage of the print data with which User Information is added and transmitted from said personal digital assistant 1 (CPU of a server 4 performs the control program memorized by ROM and other memory resources, and carries out registration processing), The 2nd authentication means which attests the user who collates User Information inputted with said image formation equipment 6, and User Information registered into the storage of said server 4, and demands the output of said print data from on said image formation equipment 6 (authentication means 7 by the side of image formation equipment 6), It is based on the authentication result of said 2nd authentication means. Since it has the 2nd control means (CPU of image formation equipment 6 performs the control program memorized by ROM and other memory resources, and carries out printing processing) which acquires the print data registered from said storage of said server 4, and controls the image output activation by image formation equipment 6 The print data inputted from a user's personal digital assistant 1 attested with registration of print data being possible are registered into the server 4. It can advance to the image formation equipment 6 of the destination which can communicate, and the radial transfer environment which is beginning to read at any time based on the printout demand from a user which cooperates with a server 4 and is attested, and is printed can be built free.

[0028] Moreover, after the image output by said image formation equipment 6, The accounting means which asks a user for the image output toll computed, and carries out settlement-of-accounts processing (it has image formation equipment 6 since it has an accounting means by which CPU of a server 4 performs and carries out accounting (based on two or more examples mentioned later for details) of the control program memorized by ROM and other memory resources) The base which performs the service industry which executes printed output processing by proxy is easily expandable. it can respond flexibly to a user's output request, print data can be printed by the vicinity print shop at any time, and a desired printing result can be obtained, and the convenience of the user using a personal digital assistant 1 is boiled markedly, and it can improve.

[0029] When CPU of a server 4 publishes a password based on the character-string-data input from said personal digital assistant 1, furthermore, the authentication means 7 Since the user who collates the password entered, character-string data, and the password and character-string data which were registered into the storage means 5, and demands the output of said print data is attested Even if it is the user who has not registered data required for authentication processing beforehand, it can attest as a user who uses data processing system easily.

[0030] Moreover, since User Information is made into the user-identification information memorized by the credit card, the user-identification information memorized by the card used widely by the existing system can also be used, and if it is a card user, data processing system can be used easily.

[0031] Furthermore, since the authentication means 7 attests the user who reads the user-identification information memorized by the credit card, and demands the output of said print data and the authentication processing also using the user-identification information memorized by the card used widely by the existing system is possible for it, if it is a card user, data processing system can be used easily.

[0032] Moreover, since CPU of a server 4 carries out automatic elimination of said print data registered into said storage means 5 after progress of the data maintain period specified from said personal digital assistant 1. The situation altogether occupied with the print data of the user by whom the print-data registration field of the storage with which a server 4 side is equipped is registered is canceled automatically. The condition that the print data from a user can be registered continuously can be made to change automatically, and the situation where it becomes impossible working a system can be avoided.

[0033] Hereafter, with reference to the flow chart shown in drawing 2, the data-processing actuation in this operation gestalt is explained.

[0034] Drawing 2 is a flow chart which shows an example of the 1st data-processing procedure of the data processing system concerning this invention. In addition, (1) - (12) shows each step.

[0035] When the server 4 is supervising the existence of the arrival of a public line and has arrival of the mail, it presents the service which can be used for a user and makes a user choose a menu at a step (2) in a step (1). It is a menu with the input (data storage) of print data, the output (data printing) of print data, other inquiries, etc.

[0036] In addition, in drawing 1, when the personal digital assistant 1 and the cellular phone 2 are possessed with the cable 3, by calling to the telephone number of a server 4, the user who wants to print data connects with a server 4 through a public line, and chooses the data input of a menu from a cellular phone 2.

[0037] When the input of print data is chosen by the user at a step (2), a user is attested at a step (3). As an authentication means, it registers as a user beforehand and there are an approach of making it key the number of a credit card, the approach of making it key the number, etc. Moreover, the user who cannot do the above-mentioned approach is made to key an identifier, and the password at the time of printing is published to him from a server 4, and he has a method of making a user key the password at the time of printing. The various above-mentioned numbers, an identifier, a password, etc. are memorized for the storage means 5 of a server 4 as user information.

[0038] When authentication processing of a user finishes being materialized, the holding time which memorizes the data which should be printed to a user next to the server 4 is made to specify at a step (3). When data printing is not performed even if it passes over the specified time of day while this is for making data print promptly when a user will do a printout by when or makes it set up beforehand, after it foresees a certain amount of float, it is for eliminating data and not accumulating data in the storage means 5 too much.

[0039] Next, at a step (4), data maintain period, i.e., after carrying out the input check of the time amount until it carries out data elimination, in a step (5), the data printed to a user are made to transmit and print data are memorized with the above-mentioned user information and a data maintain period for the storage means 5 of a server 4. Next, by judgment processing which is not illustrated, if processing of above-mentioned step (3) - (5) is completed correctly, a user will be notified of normal termination, a communication link condition will be cut, and it will return to a step (1), and will wait for the next arrival.

[0040] Next, after transmitting print data to the storage means 5 of a server 4, in order to print the data, the function of this system is incorporated, and it goes to one of the image formation equipment 6 connectable with a server 4, and by actuation of the equipment, a user connects with a server 4 and once chooses the output (data printing) of print data.

[0041] If the output (data printing) of print data is chosen by the user at a step (2), authentication processing of a user will be first performed at a step (6). Like a step (3), when a user inputs the number of a credit card, from the authentication means 7, authentication processing of this user makes a credit card put in, and reads a number.

[0042] Moreover, similarly, also in a member, a card is made to be put into the authentication means 7, and it reads a number. The user who I inputted [user] the identifier and had the password published has keyed the identifier and the password like the point.

[0043] And when the server 4 collated a user's information that were a step (7) and it was inputted with the authentication information for every user registered into the storage means 5, respectively, it judges whether it was in agreement and it is judged that there are congruous things, it reads the print data which corresponded at the step (8), and prints data at a step (9).

[0044] Next, a server 4 calculates the tariff concerning printing of data, after making the approach of paying by giving an indication for which a user is asked in the display screen of image formation equipment 6 choose and establishing a method of payment, it cuts the communication link with a server 4, returns to a step (1), and waits for the next arrival.

[0045] In addition, as an approach of paying, the settlement of accounts by the credit card, account pulling

down in the case of a member, payment by cash, etc. are made.

[0046] On the other hand, at a step (7), when it judges with there being no authentication information whose server 4 corresponded, it progresses to a step (12), for example, reinput directions of user information are performed, and when useless, error processing which refuses a receptionist is performed and it still returns to a step (1).

[0047] On the other hand, inquiry processing which performs individual correspondence in the case of being a step (11), for example, changing information offer of the address of guidance of a use tariff and the image formation equipment 6 which can be printed etc., the case where a password is forgotten although print data were registered by the identifier, and the contents registered once etc. when an inquiry is chosen by the user at a step (2) is performed, and it returns to a step (1).

[0048] In addition, although the address of the image formation equipment 6 which can be printed is making information offer in the inquiry menu, a list and retrieval are made to do it in a data input menu.

[0049] Hereafter, the description of this operation gestalt is further explained with reference to drawing 2 etc.

[0050] It is the data-processing approach of data processing system that the server 4 equipped with a storage through the predetermined communication media constituted as mentioned above, a personal digital assistant 1, and image formation equipment 6 can communicate. Or it is the storage which stored the program which the computer which controls the data processing system with which the server 4 equipped with a storage through predetermined communication media, a personal digital assistant 1, and image formation equipment 6 can communicate can read. The 1st authentication process which attests the user who collates User Information inputted from said personal digital assistant 1, and User Information registered into said server 4, and demands the input of print data (step of drawing 2 (1)), The registration process which registers into a storage the print data with which User Information is added and transmitted from said personal digital assistant 1 based on the authentication result by said 1st authentication process (step of drawing 2 (5)), The 2nd authentication process which attests the user who collates User Information inputted with said image formation equipment 6, and User Information registered into the storage of said server 4, and demands the output of said print data from on said image formation equipment 6 (step of drawing 2 (6)), The output process which acquires the print data registered from said storage of said server 4, and carries out an image output based on the authentication result by said 2nd authentication process (step of drawing 2 (9)), Since it has the accounting process (step of drawing 2 (10)) which asks a user for the image output toll computed after the image output by said output process, and carries out settlement-of-accounts processing The print data inputted from a user's personal digital assistant 1 attested with registration of print data being possible are registered into the server 4. It can advance to the image formation equipment 6 of the destination which can communicate, and the radial transfer environment which is beginning to read at any time based on the printout demand from a user which cooperates with a server 4 and is attested, and is printed can be built free.

[0051] The [2nd operation gestalt] With the above-mentioned operation gestalt, the print data received from the personal digital assistant 1 are saved for the storage means 5 connected to a server 4. Although the case where acquired the print data saved for the storage means 5 from a server 4, and printing processing was carried out from the image formation equipment 6 of the arbitration which can communicate to this server 4 was explained A user specifies specific image formation equipment 6 from a personal digital assistant 1, and it saves via a server for the storage means connected to this image formation equipment 6. The situation occupied by the storage means of a server 4 with print data may be avoided, and you may constitute so that print data can be separately managed with the storage means connected to image formation equipment 6. Hereafter, the operation gestalt is explained.

[0052] Drawing 3 is drawing explaining the configuration of the information processing system in which the 2nd operation gestalt of this invention is shown, and has given the same sign to the same thing as drawing 1.

[0053] In drawing, it is a server, 9 is equipped with a control unit equipped with CPU, RAM, ROM, etc., and it is controlling the whole information processing system while it performs data processing with the directions from the keyboard which is not illustrated. 10 is image formation equipment, is equipped with the authentication means 7 and the storage means 11 of performing authentication processing of a user, and is constituted by the telephone line 8 possible [a communication link by the server 9 and predetermined pro KOTORU].

[0054] In addition, it is constituted so that the data which were equipped with the reader section which reads the authentication information memorized by various memory media, such as a magnetic card, a PURIPEDO card, and an IC card, and read it to image formation equipment 10 through the interface which

is not illustrated may be outputted to the authentication means 7. Moreover, out of drawing, although only the specified image formation equipment 10 is shown, it is constituted so that two or more image formation equipments which are not illustrated can be specified as an output destination change.

[0055] Hereafter, the characteristic configuration of this operation gestalt is explained with reference to drawing 3 R>3 grade.

[0056] It is the data processing system with which two or more image formation equipments 10 equipped with a server 9, a personal digital assistant 1, and a storage (storage means 11) through the predetermined communication media constituted as mentioned above can communicate. User Information inputted from said personal digital assistant 1 and User Information registered into said server 9 are collated. The 1st authentication means which attests the user who demands the input of print data (CPU of a server 9 performs the control program memorized by ROM and the memory resource which is not illustrated, and carries out authentication processing), It is based on the authentication result by said 1st authentication means. the 1st control means (CPU of a server 9 -- ROM --) which controls activation of the transfer registration to the storage of one which is specified by said server 9 course in the print data with which User Information received from said personal digital assistant 1 is added of the image formation equipments 10 the control program memorized by the memory resource which is not illustrated -- performing -- control processing -- carrying out -- The 2nd authentication means which attests the user who collates User Information which has inputted the image output request to said image formation equipment 10, and User Information registered into said storage, and demands the output of said print data (authentication means 7 by the side of image formation equipment 10), Since it has the 2nd control means (CPU of image formation equipment 10 performs the control program memorized by ROM and the memory resource which is not illustrated, and carries out printing processing) which controls output activation of the print data read from said storage based on the authentication result by said 2nd authentication means Without equipping a server 9 side with a mass storage, carry out assignment registration according to the individual, and it goes for the record medium by which the print data inputted from a user's personal digital assistant 1 attested with registration of print data being possible are connected to specific image formation equipment 10 by server 9 course to specific image formation equipment 10. The radial transfer environment which is beginning to read at any time based on the printout demand from a user which cooperates with a server 9 and is attested, and is printed can be built free.

[0057] Moreover, since it has the accounting means (CPU of image formation equipment 10 performs and carries out accounting of the control program memorized by ROM and the memory resource which is not illustrated) which asks a user for the image output toll computed after the image output by said image formation equipment 10, and carries out settlement-of-accounts processing It can have image formation equipment 10 and the base which performs the service industry which executes printed output processing by proxy can be expanded easily. it can respond flexibly to a user's output request, print data can be printed by the vicinity print shop at any time, and a desired printing result can be obtained, and the convenience of the user using a personal digital assistant 1 is boiled markedly, and it can improve.

[0058] Furthermore, since the user who collates the password and character-string data into which the authentication means 7 is inputted, and the password and character-string data which were registered into said storage when CPU of a server 9 publishes a password based on the character-string-data input from said personal digital assistant 1, and demands the output of said print data is attested, even if it is the user who has not registered data required for authentication processing beforehand, it can attest as a user who uses data processing system easily.

[0059] Moreover, since User Information is made into the user-identification information memorized by the credit card, the user-identification information memorized by the card used widely by the existing system can also be used, and if it is a card user, data processing system can be used easily.

[0060] Furthermore, since the authentication means 7 attests the user who reads the user-identification information memorized by the credit card, and demands the output of said print data and the authentication processing also using the user-identification information memorized by the card used widely by the existing system is possible for it, if it is a card user, data processing system can be used easily.

[0061] Moreover, since CPU of image formation equipment 10 carries out automatic elimination of said print data registered into said storage after progress of the data maintain period specified from said personal digital assistant 1 The situation altogether occupied with the print data of the user by whom the print-data registration field of the storage with which a server 9 side is equipped is registered is canceled automatically. The condition that the print data from a user can be registered continuously can be made to change automatically, and the situation where it becomes impossible working a system can be avoided.

[0062] Hereafter, with reference to the flow chart shown in drawing 4 , the data-processing actuation in this

operation gestalt is explained.

[0063] Drawing 4 is a flow chart which shows an example of the 2nd data-processing procedure of the data processing system concerning this invention. In addition, (1) - (7) shows each step.

[0064] When the server 9 is supervising the existence of the arrival of a public line and has the arrival from a user, it presents the service which can be used for a user and makes a user choose a menu at a step (2) in a step (1).

[0065] In addition, it is a menu with the input (data storage) of print data, the output (data printing) of print data, other inquiries, etc.

[0066] Moreover, in drawing 3, when the personal digital assistant 1 and the cellular phone 2 are possessed with the cable 3, by calling to the telephone number of a server 9, the user who wants to print data connects with a server 9 through a public line, and chooses the data input of a menu from a cellular phone 2.

[0067] At a step (2), when it judges with the input of print data having been chosen, it is a step (3) and authentication processing of a user is performed. In addition, as an authentication means, it registers as a user beforehand and there are an approach of making it key the number of a credit card, the approach of making it key the number, etc.

[0068] Moreover, the user who cannot do the above-mentioned approach is made to key an identifier, and the password at the time of printing is published to him from a server 9, and he has a method of making a user key the password at the time of printing.

[0069] Furthermore, the various above-mentioned numbers, an identifier, a password, etc. are once memorized as user information to the storage buffer which a server 9 does not illustrate.

[0070] When authentication processing of a user is completed at a step (3) next, the printout point which shows a user that of printing ***** with what image formation equipment 10 is made to choose at a step (4).

[0071] As information about the image formation equipment 10 which can connect with this system and has communication facility in this operation gestalt, in addition, with information, such as a configuration of options, such as the installation, a sorter, and double-sided printing, and printing capacity It registers with the server 9 beforehand, and it is made to search at a step (4) at a user by the location as the printout point, the function to be used, and I narrow down a candidate, and have a user choose, and the selected output destination change concerned is once memorized to the storage buffer of a server 9.

[0072] Next, the holding time which memorizes the data which should be printed at a step (5) to the server 9 is made to specify. When data printing is not performed even if it passes over the specified time of day while this is for making it print data by when a user will do a printout, and by making it set up beforehand whether you are Sumiya, after it foresees a certain amount of float, it is for eliminating data and not accumulating data in the storage means 11 too much.

[0073] Next, in a step (5), data maintain period, i.e., after carrying out the input check of the time amount until it carries out data elimination, the data printed to a user in a step (6) are made to transmit, and print data are memorized via a server 9 and a communication line 8 with the user information and the data maintain period which were once memorized to the storage buffer of a server 9 mentioned above for the storage means 11 of the image formation equipment 10 which is the specified output destination change. Next, by the step which is not illustrated, if it judges that processing of step (3) - (6) has processed correctly, a user will be notified of having received data normally, a communication link condition will be cut, and it will wait for return and the next arrival to a step (1).

[0074] Although it progressed to the step (7), for example, print data were registered on the other hand by information offer of the address of guidance of a use tariff, and the image formation equipment 10 which can be printed etc., and the identifier when it judged with the inquiry having been chosen at a step (2) When you forget a password, or when changing the contents registered once, inquiry processing which performs individual correspondence of modification of an output destination change etc. is performed, and it returns to a step (1).

[0075] Next, after a user transmits print data to this system, it explains with reference to the flow chart which shows the case where the data is printed to drawing 5.

[0076] Hereafter, with reference to the flow chart shown in drawing 5, the data-processing actuation in this operation gestalt is explained.

[0077] Drawing 5 is a flow chart which shows an example of the 3rd data-processing procedure of the data processing system concerning this invention. In addition, (1) - (9) shows each step. Moreover, a user goes to the image formation equipment 10 of this system specified as the output destination change, in order to print, and he chooses the output (data printing) of the print data memorized for the storage means 11 by actuation of the equipment.

[0078] First, when the mode change of the actuation means (control panel) of image formation equipment 10 is checked and the change in printer mode from the usual copy mode is detected, a menu is expressed to the display of a control panel as a step (2), and a user is made to choose a menu in a step (1).

[0079] Here, when it judges with the output (data printing) of data having been chosen, authentication processing of a user is performed at a step (3). In addition, respectively corresponding to the same authentication approach as the step (3) shown in drawing 4, a user's authentication makes a user put in a credit card, and reads a number. Moreover, similarly, also in a member, a card is made to be put into the authentication means 7, and it reads a number. And the user who I inputted [user] the identifier and had the password published keys an identifier and a previous password.

[0080] And when it judges with image formation equipment 10 judging whether a user's information that it was inputted is collated with the authentication information on the storage means 11, and it is in agreement at a step (4), and having congruous things, the print data which corresponded at the step (5) are read, and data are printed at a step (6).

[0081] Next, at a step (7), image formation equipment 10 calculates the tariff concerning printing of data, performs tariff accounting including the display for which a user is asked to the display screen of image formation equipment 10, and returns to it to a step (1).

[0082] In addition, as an approach of paying, the settlement of accounts by the credit card, account pulling down in the case of a member, payment by cash, etc. are made.

[0083] On the other hand, at a step (4), when it judges with there being no congruous authentication information, it progresses to a step (9), for example, reinput directions of user information are performed, and when useless, error processing which refuses a receptionist is performed and it still returns to (9) and a step (1).

[0084] Query processing, such as being a step (8) on the other hand, when it judges with the inquiry having been chosen at a step (2), for example, performing individual correspondence of modification of an output destination change etc., information offer of presentation of a use tariff, the address of the image formation equipment 10 which can be printed, etc., when [although print data were registered by the identifier,] you forget a password, or when changing the contents registered once, is performed, and it returns to a step (1). In addition, these processings are performed through a server 9 and a communication line 8.

[0085] Hereafter, the description of this operation gestalt is further explained with reference to drawing 4 and drawing 5 R>5 grade.

[0086] It is the data-processing approach of data processing system that two or more image formation equipments 10 equipped with a server 9, a personal digital assistant 1, and a storage (storage means 11) through the predetermined communication media constituted as mentioned above can communicate. Or it is the storage which stored the program which the computer which controls the data processing system with which two or more image formation equipments 10 equipped with a server 9, a personal digital assistant 1, and a storage through predetermined communication media can communicate can read. The 1st authentication process which attests the user who collates User Information inputted from said personal digital assistant 1, and User Information registered into said server 9, and demands the input of print data (step of drawing 4 (3)), The registration process which performs transfer registration to the storage of one which is specified by said server 9 course in the print data with which User Information received from said personal digital assistant 1 is added based on the authentication result by said 1st authentication process of the image formation equipments 10 (step of drawing 4 (6)), The 2nd authentication process which attests the user who collates User Information which has inputted the image output request to said image formation equipment 10, and User Information registered into said storage, and demands the output of said print data (step of drawing 5 (3)), The output process which outputs the print data read from said storage based on the authentication result by said 2nd authentication process (step of drawing 5 (6)), Since it has the accounting process (step of drawing 5 (7)) which asks a user for the image output toll computed after the image output by said output process, and carries out settlement-of-accounts processing Assignment registration is carried out according to the individual at the record medium by which the print data inputted from a user's personal digital assistant 1 attested with registration of print data being possible are connected to image formation equipment via a server, without equipping a server 9 side with a mass storage. It can advance to the image formation equipment of the destination which can communicate, and the radial transfer environment which is beginning to read at any time based on the printout demand from a user which cooperates with a server 9 and is attested, and is printed can be built free.

[0087] The [3rd operation gestalt] In the above-mentioned 1st and 2nd operation gestalt, although he explained the case where it connected with the servers 4 and 9 of a system, from the personal digital assistant 1 using the cellular phone 2, even if a user uses the public telephone of an ISDN circuit all over a

town instead of a cellular phone 2, he is the same.

[0088] The data processing system hereafter applied to this invention with reference to the memory map shown in drawing 6 explains the configuration of the data-processing program which can be read.

[0089] Drawing 6 is drawing explaining the memory map of the storage which stores the various data-processing programs which can be read with the data processing system concerning this invention.

[0090] In addition, although it does not illustrate especially, the information for which the information which manages the program group memorized by the storage, for example, version information, an implementer, etc. are memorized, and it depends on OS by the side of program read-out etc., for example, the icon which indicates the program by discernment, may be memorized.

[0091] Furthermore, the data subordinate to various programs are also managed to the above-mentioned directory. Moreover, the program for installing various programs in a computer, the program thawed when the program to install is compressed may be memorized.

[0092] The function shown in drawing 2 in this operation gestalt, drawing 4 , and drawing 5 may be carried out with the host computer by the program installed from the outside. And this invention is applied even when the information group which includes a program from an external storage is supplied by the output unit through storages, such as CD-ROM, a flash memory, and FD, or a network in that case.

[0093] As mentioned above, it cannot be overemphasized by supplying the storage which recorded the program code of the software which realizes the function of the operation gestalt mentioned above to a system or equipment, and carrying out read-out activation of the program code with which the computer (or CPU and MPU) of the system or equipment was stored in the storage that the purpose of this invention is attained.

[0094] In this case, the program code itself read from the storage will realize the new function of this invention, and the storage which memorized that program code will constitute this invention.

[0095] As a storage for supplying a program code, a floppy disk, a hard disk, an optical disk, a magneto-optic disk, CD-ROM, CD-R, a magnetic tape, the memory card of a non-volatile, ROM, EEPROM, etc. can be used, for example.

[0096] Moreover, it cannot be overemphasized that it is contained also when the function of the operation gestalt which performed a part or all of processing that OS (operating system) which is working on a computer is actual, based on directions of the program code, and the function of the operation gestalt mentioned above by performing the program code which the computer read is not only realized, but was mentioned above by the processing is realized.

[0097] Furthermore, after the program code read from a storage is written in the memory with which the functional expansion unit connected to the functional add-in board inserted in the computer or a computer is equipped, it cannot be overemphasized that it is contained also when the function of the operation gestalt which performed a part or all of processing that CPU with which the functional add-in board and functional expansion unit are equipped based on directions of the program code is actual, and mentioned above by the processing is realized.

[0098] The image-processing service which used copy service and print service together can be developed using a digital copier, without according to the above-mentioned operation gestalt, being able to receive print vicarious execution service from the image formation equipment arranged at the point which a user means, without needing a full-time operator in any way, for example, troubling a help at a convenience store etc. Thereby, a user can go to the base of the image formation equipment which he chose by his assignment **** time of day always for 24 hours, or can get an output from the image formation equipment of arbitration at any time by easy actuation of requiring print data of a user.

[0099] Moreover, since this invention is applicable through not only the so-called mobile computer but a server, and the telephone line even if it is the portable notebook computer which can communicate and a user can choose the base according to the spec. of image formation equipment as arbitration, a personal digital assistant can also perform easily double-sided print which cannot carry out printing processing, print by which image edit was carried out, and high-speed print processing by the so-called printer of personal device level.

[0100]

[Effect of the Invention] As explained above, according to the 1st invention concerning this invention, it is the data processing system with which the server equipped with a storage through predetermined communication media, a personal digital assistant, and image formation equipment can communicate. The 1st authentication means which attests the user who collates User Information inputted from said personal digital assistant, and User Information registered into said server, and demands the input of print data, The 1st control means which controls the registration activation to the storage of the print data with which User

Information is added and transmitted from said personal digital assistant based on the authentication result by said 1st authentication means, The 2nd authentication means which attests the user who collates User Information inputted with said image formation equipment, and User Information registered into the storage of said server, and demands the output of said print data from on said image formation equipment, Since it has the 2nd control means which acquires the print data registered from said storage of said server based on the authentication result of said 2nd authentication means, and controls the image output activation by image formation equipment The print data inputted from a user's personal digital assistant attested with registration of print data being possible are registered into the server. It can advance to the image formation equipment of the destination which can communicate, and the radial transfer environment which is beginning to read at any time based on the printout demand from a user which cooperates with a server and is attested, and is printed can be built free.

[0101] Since it has the accounting means which asks a user for the image output toll computed after the image output by said image formation equipment, and carries out settlement-of-accounts processing according to the 2nd invention It can have image formation equipment and the base which performs the service industry which executes printed output processing by proxy can be expanded easily. the convenience of the user using a personal digital assistant who can respond flexibly to a user's output request, can print print data by the vicinity print shop at any time, and can obtain a desired printing result is boiled markedly, and it can improve.

[0102] When said 1st authentication means publishes a password based on the character-string-data input from said personal digital assistant according to the 3rd invention, said 2nd authentication means Since the user who collates the password entered, character-string data, and the password and character-string data which were registered into said storage, and demands the output of said print data is attested Even if it is the user who has not registered data required for authentication processing beforehand, it can attest as a user who uses data processing system easily.

[0103] Since User Information is made into the user-identification information memorized by the credit card according to the 4th invention, the user-identification information memorized by the card used widely by the existing system can also be used, and if it is a card user, data processing system can be used easily.

[0104] Since according to the 5th invention the user who reads the user-identification information memorized by the credit card, and demands the output of said print data is attested and the authentication processing also using the user-identification information memorized by the card used widely by the existing system is possible for said 2nd authentication means, if it is a card user, data processing system can be used easily.

[0105] According to the 6th invention, said 1st control means Since automatic elimination of said print data registered into said storage after progress of the data maintain period specified from said personal digital assistant is carried out The situation altogether occupied with the print data of the user by whom the print-data registration field of the storage with which a server side is equipped is registered is canceled automatically. The condition that the print data from a user can be registered continuously can be made to change automatically, and the situation where it becomes impossible working a system can be avoided.

[0106] According to the 7th invention, it is the data processing system with which two or more image formation equipments equipped with a server, a personal digital assistant, and a storage through predetermined communication media can communicate. The 1st authentication means which attests the user who collates User Information inputted from said personal digital assistant, and User Information registered into said server, and demands the input of print data, The 1st control means which controls activation of the transfer registration to the storage of one which is specified via said server in the print data with which User Information received from said personal digital assistant is added based on the authentication result by said 1st authentication means of image formation equipments, The 2nd authentication means which attests the user who collates User Information which has inputted the image output request to said image formation equipment, and User Information registered into said storage, and demands the output of said print data, Since it has the 2nd control means which controls output activation of the print data read from said storage based on the authentication result by said 2nd authentication means Assignment registration is carried out according to the individual at the record medium by which the print data inputted from a user's personal digital assistant attested with registration of print data being possible are connected to the image formation equipment of a server course and specification, without equipping a server side with a mass storage. It can advance to specific image formation equipment, and the radial transfer environment which is beginning to read at any time based on the printout demand from a user which cooperates with a server and is attested, and is printed can be built free.

[0107] Since it has the accounting means which asks a user for the image output toll computed after the

image output by said image formation equipment, and carries out settlement-of-accounts processing according to the 8th invention. It can have image formation equipment and the base which performs the service industry which executes printed output processing by proxy can be expanded easily. The convenience of the user using a personal digital assistant who can respond flexibly to a user's output request, can print print data by the vicinity print shop at any time, and can obtain a desired printing result is boiled markedly, and it can improve.

[0108] When said 1st authentication means publishes a password based on the character-string-data input from said personal digital assistant according to the 9th invention, said 2nd authentication means. Since the user who collates the password entered, character-string data, and the password and character-string data which were registered into said storage, and demands the output of said print data is attested. Even if it is the user who has not registered data required for authentication processing beforehand, it can attest as a user who uses data processing system easily.

[0109] Since User Information is made into the user-identification information memorized by the credit card according to the 10th invention, the user-identification information memorized by the card used widely by the existing system can also be used, and if it is a card user, data processing system can be used easily.

[0110] Since according to the 11th invention the user who reads the user-identification information memorized by the credit card, and demands the output of said print data is attested and the authentication processing also using the user-identification information memorized by the card used widely by the existing system is possible for said 2nd authentication means, if it is a card user, data processing system can be used easily.

[0111] According to the 12th invention, said 2nd control means. Since automatic elimination of said print data registered into said storage after progress of the data maintain period specified from said personal digital assistant is carried out. The situation altogether occupied with the print data of the user by whom the print-data registration field of the storage with which a server side is equipped is registered is canceled automatically. The condition that the print data from a user can be registered continuously can be made to change automatically, and the situation where it becomes impossible working a system can be avoided.

[0112] The 13th and 15th invention is the data-processing approach of data processing system that the server equipped with a storage through predetermined communication media, a personal digital assistant, and image formation equipment can communicate. Or it is the storage which stored the program which the computer which controls the data processing system with which the server equipped with a storage through predetermined communication media, a personal digital assistant, and image formation equipment can communicate can read. The 1st authentication process which attests the user who collates User Information inputted from said personal digital assistant, and User Information registered into said server, and demands the input of print data, The registration process which registers into a storage the print data with which User Information is added and transmitted from said personal digital assistant based on the authentication result by said 1st authentication process, The 2nd authentication process which attests the user who collates User Information inputted with said image formation equipment, and User Information registered into the storage of said server, and demands the output of said print data from on said image formation equipment, The output process which acquires the print data registered from said storage of said server, and carries out an image output based on the authentication result by said 2nd authentication process, Since it has the accounting process which asks a user for the image output toll computed after the image output by said output process, and carries out settlement-of-accounts processing. The print data inputted from a user's personal digital assistant attested with registration of print data being possible are registered into the server. It can advance to the image formation equipment of the destination which can communicate, and the radial transfer environment which is beginning to read at any time based on the printout demand from a user which cooperates with a server and is attested, and is printed can be built free.

[0113] According to the 14th and 16th invention, it is the data-processing approach of data processing system that two or more image formation equipments equipped with a server, a personal digital assistant, and a storage through predetermined communication media can communicate. Or it is the storage which stored the program which the computer which controls the data processing system with which two or more image formation equipments equipped with a server, a personal digital assistant, and a storage through predetermined communication media can communicate can read. The 1st authentication process which attests the user who collates User Information inputted from said personal digital assistant, and User Information registered into said server, and demands the input of print data, The registration process which performs transfer registration to the storage of one which is specified via said server in the print data with which User Information received from said personal digital assistant is added based on the authentication result by said 1st authentication process of image formation equipments, The 2nd authentication process

which attests the user who collates User Information which has inputted the image output request to said image formation equipment, and User Information registered into said storage, and demands the output of said print data, The output process which outputs the print data read from said storage based on the authentication result by said 2nd authentication process, Since it has the accounting process which asks a user for the image output toll computed after the image output by said output process, and carries out settlement-of-accounts processing Assignment registration is carried out according to the individual at the record medium by which the print data inputted from a user's personal digital assistant attested with registration of print data being possible are connected to image formation equipment via a server, without equipping a server side with a mass storage. It can advance to the image formation equipment of the destination which can communicate, and the radial transfer environment which is beginning to read at any time based on the printout demand from a user which cooperates with a server and is attested, and is printed can be built free.

[0114] therefore, a user is provided with the print service which a user can receive, being accompanied by accounting at the installation place of the arbitration equipped with image formation equipment for the printing service using a personal digital assistant, and the effectiveness of the convenience of a personal digital assistant being boiled markedly and being able to improve is done so.

[Translation done.]

* NOTICES *

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1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is drawing explaining the configuration of the information processing system in which the 1st operation gestalt of this invention is shown.

[Drawing 2] It is the flow chart which shows an example of the 1st data-processing procedure of the data processing system concerning this invention.

[Drawing 3] It is drawing explaining the configuration of the information processing system in which the 2nd operation gestalt of this invention is shown.

[Drawing 4] It is the flow chart which shows an example of the 2nd data-processing procedure of the data processing system concerning this invention.

[Drawing 5] It is the flow chart which shows an example of the 3rd data-processing procedure of the data processing system concerning this invention.

[Drawing 6] It is drawing explaining the memory map of the storage which stores the various data-processing programs which can be read with the data processing system concerning this invention.

[Description of Notations]

1 Personal Digital Assistant

2 Cellular Phone

4 Server

5 Storage Means

6 Image Formation Equipment

7 Authentication Means

8 Communication Line

[Translation done.]

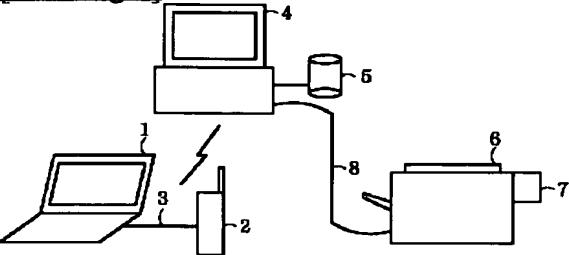
* NOTICES *

JPO and NCIPI are not responsible for any damages caused by the use of this translation.

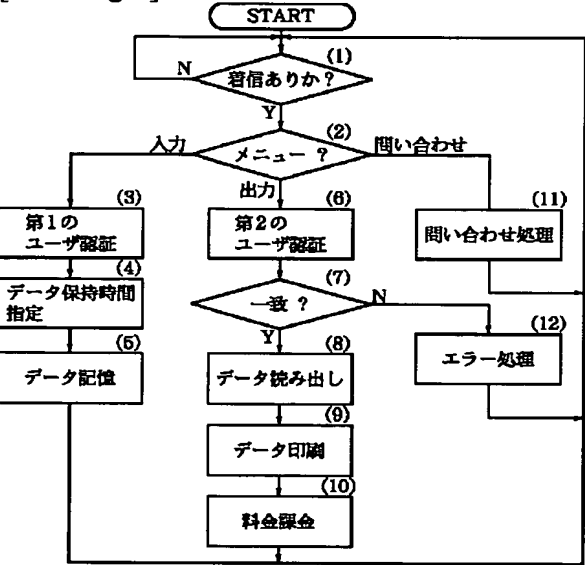
- 1.This document has been translated by computer. So the translation may not reflect the original precisely.
- 2.**** shows the word which can not be translated.
- 3.In the drawings, any words are not translated.

DRAWINGS

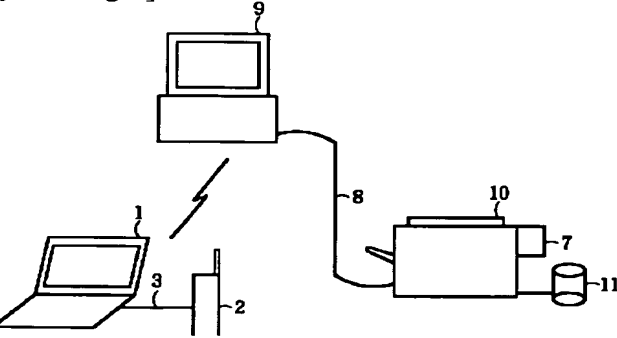
[Drawing 1]



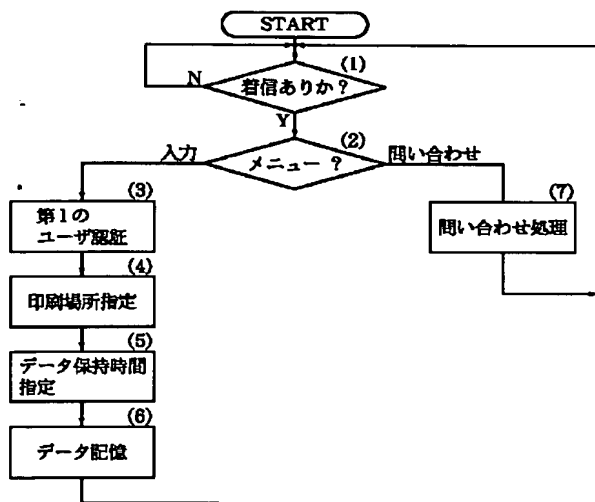
[Drawing 2]



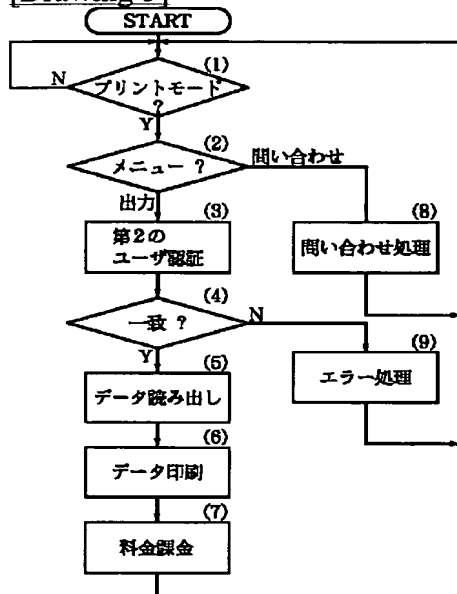
[Drawing 3]



[Drawing 4]



[Drawing 5]



[Drawing 6]

FD/CD-ROM等の記憶媒体

ディレクトリ情報
第1のデータ処理プログラム 図2に示すフローチャートのステップに対応するプログラムコード群
第2のデータ処理プログラム 図4に示すフローチャートのステップに対応するプログラムコード群
第3のデータ処理プログラム 図5に示すフローチャートのステップに対応するプログラムコード群

記憶媒体のメモリマップ

[Translation done.]

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